

CHAPTER 2.2.13.

BLUETONGUE

Article 2.2.13.1.

For the purposes of the *Terrestrial Code*, the *infective period* for bluetongue virus (BTV) shall be 60 days.

The global BTV distribution is currently between latitudes of approximately 50°N and 34°S but is known to be expanding in the northern hemisphere.

In the absence of clinical disease in a country or *zone* within this part of the world, its BTV status should be determined by an ongoing surveillance ~~and monitoring~~ programme (in accordance with Appendix 3.8.X.) ~~designed in accordance with the epidemiology of the disease, i.e. focusing on climatic and geographical factors, the biology and likely competence of *Culicoides* and/or serology of susceptible animals.~~ The programme may need to be adapted to target parts of the country or *zone* at a higher risk due to historical, geographical and climatic factors, ruminant population data and *Culicoides* ecology, or proximity to enzootic or incursional *zones* as described in Appendix 3.8.X.

All countries or *zones* adjacent to a country or *zone* not having free status should be subjected to similar surveillance. The surveillance should be carried out over a distance of at least 100 kilometres from the border with that country or *zone*, but a lesser distance could be acceptable if there are relevant ecological or geographical features likely to interrupt the transmission of BTV, or a bluetongue surveillance programme (in accordance with Appendix 3.8.X.) in the country or *zone* not having free status supports a lesser distance.

Standards for diagnostic tests and vaccines are described in the *Terrestrial Manual*.

Article 2.2.13.2.

**BTV free country or zone**

1. A country or a *zone* may be considered free from BTV when bluetongue is notifiable in the whole country and either:
  - a) the country or *zone* lies wholly north of 50°N or south of 34°S, and is not adjacent to a country or *zone* not having a free status; or
  - b) a surveillance and monitoring programme in accordance with Appendix 3.8.X. has demonstrated no evidence of BTV in the country or *zone* during the past 2 years; or
  - c) a surveillance and monitoring programme has demonstrated no evidence of *Culicoides* likely to be competent BTV vectors in the country or *zone*.
2. A BTV free country or *zone* in which surveillance and monitoring has found no evidence that *Culicoides* likely to be competent BTV vectors are present will not lose its free status through the importation of vaccinated, seropositive or infective animals, or semen or embryos/ova from infected countries or *zones*.

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3. A BTV free country or *zone* in which surveillance and monitoring has found evidence that *Culicoides* likely to be competent BTV vectors are present will not lose its free status through the importation of vaccinated or seropositive animals from infected countries or *zones*, provided:

- a) the animals have been vaccinated in accordance with the *Terrestrial Manual* at least 60 days prior to dispatch with a vaccine which covers all serotypes whose presence in the source population has been demonstrated through a surveillance and monitoring programme in accordance with Appendix 3.8.X., and that the animals are identified in the accompanying certification as having been vaccinated; or
- b) the animals are not vaccinated, and a surveillance and monitoring programme in accordance with Appendix 3.8.X. has been in place in the source population for a period of 60 days immediately prior to dispatch, and no evidence of BTV transmission has been detected.

4. A BTV free country or *zone* adjacent to an infected country or *zone* should include a *zone* in which surveillance is conducted in accordance with Appendix 3.8.X. Animals within this *zone* must be subjected to continuing surveillance. The boundaries of this *zone* must be clearly defined, and must take account of geographical and epidemiological factors that are relevant to BTV transmission.

### Article 2.2.13.3.

#### **BTV seasonally free zone**

A BTV seasonally free *zone* is a part of an infected country or *zone* for which for part of a year, surveillance and monitoring demonstrate no evidence either of BTV transmission or of adult *Culicoides* likely to be competent BTV vectors.

For the application of Articles 2.2.13.7., 2.2.13.10. and 2.2.13.14., the seasonally free period is taken to commence the day following the last evidence of BTV transmission (as demonstrated by the surveillance and monitoring programme), or of the cessation of activity of adult *Culicoides* likely to be competent BTV vectors.

For the application of Articles 2.2.13.7., 2.2.13.10. and 2.2.13.14., the seasonally free period is taken to conclude either:

1. at least 28 days before the earliest date that historical data show bluetongue virus activity has recommenced; or
2. immediately if current climatic data or data from a surveillance and monitoring programme indicate an earlier resurgence of activity of adult *Culicoides* likely to be competent BTV vectors.

A BTV seasonally free *zone* in which surveillance and monitoring has found no evidence that *Culicoides* likely to be competent BTV vectors are present will not lose its free status through the importation of vaccinated, seropositive or infective animals, or semen or embryos/ova from infected countries or *zones*.

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### Article 2.2.13.4.

#### **BTV infected country or zone**

A BTV infected country or *zone* is a clearly defined area where evidence of BTV has been reported during the past 2 years.

### Article 2.2.13.5.

*Veterinary Administrations* of countries shall consider whether there is a risk with regard to BTV infection in accepting importation or transit through their territory, from other countries, of the following *commodities*:

1. ruminants and other BTV susceptible herbivores;
2. semen of these species;
3. embryos/ova of these species;
4. *pathological material* and biological products (from these species) (see Chapter 1.4.6. and Section 1.5.).

Other *commodities* should be considered as not having the potential to spread BTV when they are the subject of *international trade*.

### Article 2.2.13.6.

When importing from BTV free countries or *zones*, *Veterinary Administrations* should require:

for ruminants and other BTV susceptible herbivores

the presentation of an *international veterinary certificate* attesting that:

1. the animals were kept in a BTV free country or *zone* since birth or for at least 60 days prior to shipment; or
2. the animals were kept in a BTV free country or *zone* for at least 28 days, then were subjected, with negative results, to a serological test to detect antibody to the BTV group according to the *Terrestrial Manual* and remained in the BTV free country or *zone* until shipment; or
3. the animals were kept in a BTV free country or *zone* for at least 7 days, then were subjected, with negative results, to an agent identification test according to the *Terrestrial Manual* and remained in the BTV free country or *zone* until shipment; or
4. the animals:
  - a) were kept in a BTV free country or *zone* for at least 7 days;
  - b) were vaccinated in accordance with the *Terrestrial Manual* 60 days before introduction into the free country or *zone* against all serotypes whose presence in the source population has been demonstrated through a surveillance and monitoring programme as described in Appendix 3.8.1.;

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- c) were identified as having been vaccinated; and
- d) remained in the BTV free country or *zone* until shipment;

AND

- 5. if the animals were exported from a free *zone*, either:
  - a) did not transit through an infected *zone* during transportation to the *place of shipment*; or
  - b) were protected from attack from *Culicoides* likely to be competent BTV vectors at all times when transiting through an infected *zone*; or
  - c) had been vaccinated in accordance with point 4) above.

### Article 2.2.13.7.

When importing from BTV seasonally free *zones*, *Veterinary Administrations* should require:

for ruminants and other BTV susceptible herbivores

the presentation of an *international veterinary certificate* attesting that the animals:

- 1. were kept during the seasonally free period in a BTV seasonally free *zone* for at least 60 days prior to shipment; or
- 2. were kept during the BTV seasonally free period in a BTV seasonally free *zone* for at least 28 days prior to shipment, and were subjected during the residence period in the *zone* to a serological test to detect antibody to the BTV group according to the *Terrestrial Manual*, with negative results, carried out at least 28 days after the commencement of the residence period; or
- 3. were kept during the BTV seasonally free period in a BTV seasonally free *zone* for at least 14 days prior to shipment, and were subjected during the residence period in the *zone* to an agent identification test according to the *Terrestrial Manual*, with negative results, carried out at least 14 days after the commencement of the residence period; or
- 4. were kept during the seasonally free period in a BTV seasonally free *zone*, and were vaccinated in accordance with the *Terrestrial Manual* 60 days before introduction into the free country or *zone* against all serotypes whose presence in the source population has been demonstrated through a surveillance and monitoring programme in accordance with Appendix 3.8.X., were identified as having been vaccinated and remained in the BTV free country or *zone* until shipment;

AND

- 5. if the animals were exported from a free *zone*, either:
  - a) did not transit through an infected *zone* during transportation to the *place of shipment*, or
  - b) were protected from attack from *Culicoides* likely to be competent BTV vectors at all times when transiting through an infected *zone*, or
  - c) were vaccinated in accordance with point 4) above.

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### Article 2.2.13.8.

When importing from BTV infected countries or *zones*, *Veterinary Administrations* should require:

for ruminants and other BTV susceptible herbivores

the presentation of an *international veterinary certificate* attesting that the animals:

1. were protected from attack from *Culicoides* likely to be competent BTV vectors for at least 60 days prior to shipment; or
2. were protected from attack from *Culicoides* likely to be competent BTV vectors for at least 28 days prior to shipment, and were subjected during that period to a serological test according to the *Terrestrial Manual* to detect antibody to the BTV group, with negative results, carried out at least 28 days after introduction into the *quarantine station*; or
3. were protected from attack from *Culicoides* likely to be competent BTV vectors for at least 14 days prior to shipment, and were subjected during that period to an agent identification test according to the *Terrestrial Manual*, with negative results, carried out at least 14 days after introduction into the *quarantine station*; or
4. were vaccinated in accordance with the *Terrestrial Manual* at least 60 days before shipment, against all serotypes whose presence in the source population has been demonstrated through a surveillance and monitoring programme in accordance with Appendix 3.8.1., and were identified in the accompanying certification as having been vaccinated; or
5. are not vaccinated, a surveillance and monitoring programme in accordance with 3.8.1. has been in place in the source population for a period of 60 days immediately prior to shipment, and no evidence of BTV transmission has been detected;

AND

6. were protected from attack from *Culicoides* likely to be competent BTV vectors during transportation to the *place of shipment*; or
7. were vaccinated 60 days before shipment or had antibodies against all serotypes whose presence in the *zones* of transit has been demonstrated through a surveillance and monitoring programme in accordance with Appendix 3.8.1.

### Article 2.2.13.9.

When importing from BTV free countries or *zones*, *Veterinary Administrations* should require:

for semen of ruminants and other BTV susceptible herbivores

the presentation of an *international veterinary certificate* attesting that:

1. the donor animals:
  - a) were kept in a BTV free country or *zone* for at least 60 days before commencement of, and during, collection of the semen; or

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- b) were subjected to a serological test according to the *Terrestrial Manual* to detect antibody to the BTV group, between 21 and 60 days after the last collection for this consignment, with negative results; or
  - c) were subjected to an agent identification test according to the *Terrestrial Manual* on blood samples collected at commencement and conclusion of, and at least every 7 days (virus isolation test) or at least every 28 days (PCR test) during, semen collection for this consignment, with negative results;
2. the semen was collected, processed and stored in conformity with Appendix 3.2.1.

### Article 2.2.13.10.

When importing from BTV seasonally free *zones*, *Veterinary Administrations* should require:

for semen of ruminants and other BTV susceptible herbivores

the presentation of an *international veterinary certificate* attesting that:

1. the donor animals:
- a) were kept during the BTV seasonally free period in a seasonally free *zone* for at least 60 days before commencement of, and during, collection of the semen; or
  - b) were subjected to a serological test according to the *Terrestrial Manual* to detect antibody to the BTV group, with negative results, at least every 60 days throughout the collection period and between 21 and 60 days after the final collection for this consignment; or
  - c) were subjected to an agent identification test according to the *Terrestrial Manual* on blood samples collected at commencement and conclusion of, and at least every 7 days (virus isolation test) or at least every 28 days (PCR test) during, semen collection for this consignment, with negative results;
2. the semen was collected, processed and stored in conformity with Appendix 3.2.1.

### Article 2.2.13.11.

When importing from BTV infected countries or *zones*, *Veterinary Administrations* should require:

for semen of ruminants and other BTV susceptible herbivores

the presentation of an *international veterinary certificate* attesting that:

1. the donor animals:
- a) were protected from attack from *Culicoides* likely to be competent BTV vectors for at least 60 days before commencement of, and during, collection of the semen; or
  - b) were subjected to a serological test according to the *Terrestrial Manual* to detect antibody to the BTV group, with negative results, at least every 60 days throughout the collection

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period and between 21 and 60 days after the final collection for this consignment; or

- c) were subjected to an agent identification test according to the *Terrestrial Manual* on blood samples collected at commencement and conclusion of, and at least every 7 days (virus isolation test) or at least every 28 days (PCR test) during, semen collection for this consignment, with negative results;

2. the semen was collected, processed and stored in conformity with Appendix 3.2.1.

### Article 2.2.13.12.

Regardless of the bluetongue status of the *exporting country*, *Veterinary Administrations* of *importing countries* should require:

for *in vivo* derived bovine embryos/oocytes

the presentation of an *international veterinary certificate* attesting that the embryos/oocytes were collected, processed and stored in conformity with the provisions of Appendix 3.3.1. or Appendix 3.3.3., as relevant.

### Article 2.2.13.13.

When importing from BTV free countries or *zones*, *Veterinary Administrations* should require:

for *in vivo* derived embryos of ruminants (other than bovines) and other BTV susceptible herbivores

the presentation of an *international veterinary certificate* attesting that:

1. the donor females:
  - a) were kept in a BTV free country or *zone* for at least the 60 days prior to, and at the time of, collection of the embryos; or
  - b) were subjected to a serological test according to the *Terrestrial Manual* to detect antibody to the BTV group, between 21 and 60 days after collection, with negative results; or
  - c) were subjected to an agent identification test according to the *Terrestrial Manual* on a blood sample taken on the day of collection, with negative results;
2. the embryos were collected, processed and stored in conformity with Appendix 3.3.1.

### Article 2.2.13.14.

When importing from BTV seasonally free *zones*, *Veterinary Administrations* should require:

for *in vivo* derived embryos/oocytes of ruminants (other than bovines) and other BTV susceptible herbivores and for *in vitro* produced bovine embryos

the presentation of an *international veterinary certificate* attesting that:

1. the donor females:
  - a) were kept during the seasonally free period in a seasonally free *zone* for at least 60 days before commencement of, and during, collection of the embryos/oocytes; or

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- b) were subjected to a serological test according to the *Terrestrial Manual* to detect antibody to the BTV group, between 21 and 60 days after collection, with negative results; or
  - c) were subjected to an agent identification test according to the *Terrestrial Manual* on a blood sample taken on the day of collection, with negative results;
2. the embryos/oocytes were collected, processed and stored in conformity with Appendix 3.3.1.

### Article 2.2.13.15.

When importing from BTV infected countries or *zones*, *Veterinary Administrations* should require:

for *in vivo* derived embryos/oocytes of ruminants (other than bovines) and other BTV susceptible herbivores and for *in vitro* produced bovine embryos

the presentation of an *international veterinary certificate* attesting that:

- 1. the donor females:
  - a) were protected from attack from *Culicoides* likely to be competent BTV vectors for at least 60 days before commencement of, and during, collection of the embryos/oocytes; or
  - b) were subjected to a serological test according to the *Terrestrial Manual* to detect antibody to the BTV group, between 21 and 60 days after collection, with negative results; or
  - c) were subjected to an agent identification test according to the *Terrestrial Manual* on a blood sample taken on the day of collection, with negative results;
- 2. the embryos/oocytes were collected, processed and stored in conformity with Appendix 3.3.1.

### Article 2.2.13.16.

#### **Protecting animals from *Culicoides* attack**

When transporting animals through BTV infected countries or *zones*, *Veterinary Administrations* should require strategies to protect animals from attack from *Culicoides* likely to be competent BTV vectors during transport, taking into account the local ecology of the vector.

Potential risk management strategies include:

- 1. treating animals with chemical repellents prior to and during transportation;
- 2. loading, transporting and unloading animals at times of low vector activity (i.e. bright sunshine, low temperature);
- 3. ensuring *vehicles* do not stop en route during dawn or dusk, or overnight, unless the animals are held behind insect proof netting;
- 4. darkening the interior of the *vehicle*, for example by covering the roof and/or sides of *vehicles* with shade cloth;



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5. monitoring for vectors at common stopping and offloading points to gain information on seasonal variations;
  6. using historical, ongoing and/or BTV modelling information to identify low risk ports and transport routes.
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